

Appendix 2-A

VALLEY RANCH DEVELOPMENT
PROJECTED ULTIMATE WASTEWATER FLOWS

5/8/2000

| Land Use | Acres | Population | Unit Flow (GPCD) | Average Daily WW Flow (GPD) | Average Daily WW Flow (MGD) |
|---|-------------|--------------|------------------|-----------------------------|-----------------------------|
| Residential (3-5 DU/AC) | 288 | 5040 | 80 | 403200 | 0.40 |
| | 257 | 4498 | 80 | 359800 | 0.36 |
| | 174 | 3045 | 80 | 243600 | 0.24 |
| | 52 | 910 | 80 | 72800 | 0.07 |
| Residential (5-7 DU/AC) | 111 | 2720 | 80 | 217560 | 0.22 |
| | 222 | 5439 | 80 | 435120 | 0.44 |
| | 224 | 5488 | 80 | 439040 | 0.44 |
| Residential (7-10 DU/AC) | 90 | 3150 | 80 | 252000 | 0.25 |
| | 188 | 6580 | 80 | 526400 | 0.53 |
| | 94 | 3290 | 80 | 263200 | 0.26 |
| | 39 | 1365 | 80 | 109200 | 0.11 |
| Residential (16-22 DU/AC) | 71 | 3905 | 80 | 312400 | 0.31 |
| Mixed Density Area | 355 | 12425 | 80 | 994000 | 0.99 |
| Neighborhood Commercial | 12 | | 31200 | 31200 | 0.03 |
| | 18 | | 46800 | 46800 | 0.05 |
| | 10 | | 26000 | 26000 | 0.03 |
| Regional Commercial | 58 | | 150800 | 150800 | 0.15 |
| Industrial | 135 | | 351000 | 351000 | 0.35 |
| | 104 | | 270400 | 270400 | 0.27 |
| | 265 | | 689000 | 689000 | 0.69 |
| Government | 26 | | 67600 | 67600 | 0.07 |
| TOTAL | 2793 | 57854 | | 6,261,120 | 6.26 |
| TOTAL PE | | | | 62,611 | |
| TOTAL SFE | | | | 17,889 | |
| PEAK FLOW (PEAKING FACTOR = 2.5) | | | | 15,652,800 | 15.7 |

ASSUMPTIONS:

RESIDENTIAL (16-22 DU/AC) ASSUMED MULTI-FAMILY HOUSING

MAX DENSITY WAS USED FOR WATER DEMAND PROJECTION

SINGLE FAMILY: 3.5 PERS/UNIT; 80 GPCD ⁽¹⁾⁽³⁾

MULTI-FAMILY: 2.5 PEOPLE/UNIT; 75 GPCD ⁽¹⁾

GOVERNMENT (OFFICE): 2600 GAL PER ACRE PER DAY (ASSUMED COMMERCIAL FLOW RATE) ⁽⁴⁾

INDUSTRIAL: 2600 GAL PER ACRE PER DAY (SINGLE STORY) ⁽⁴⁾

COMMERCIAL RETAIL: 2600 GAL PER ACRE PER DAY ⁽⁴⁾

1. KAWAMURA, SUSUMU, *INTEGRATED DESIGN OF WATER TREATMENT FACILITIES*, JOHN WILEY & SONS, INC. 1991.

2. EL PASO COUNTY DEPARTMENT OF HEALTH AND ENVIRONMENT, "INDIVIDUAL SEWAGE DISPOSAL SYSTEM REGULATIONS", EFFECTIVE OCTOBER 11, 1996.

3. *GUIDELINES FOR INDIVIDUAL SEWAGE DISPOSAL SYSTEMS*, COLORADO DEPARTMENT OF HEALTH, WATER QUALITY CONTROL DIVISION, REVISED 1994.

4. COMPARISON OF COMMUNITIES OF SIMILAR SIZE, SEE ATTACHED SPREADSHEET FOR COMMUNITY COMPARISON

** ASSUMED MAXIMUM DENSITY FOR ALL RESIDENTIAL AREAS; USED 10 DU/ACRE FOR MIXED DENSITY AREA SINCE ACTUAL DWELLING UNITS ARE UNKNOWN AT THIS TIME.